

Work Order ID 85610

85610

Page 1

June-12-12 8:49:16 AM

Item ID: D2574

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Saddle, Aft In 205

Stop ***NS2***

Start Date: 12/06/2012 Start Qty: 12.00

12

Cust Item ID:

Required Date: 26/06/2012 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals: Process Plan: *MLJ*

Date: *12/06/12* Tooling:

Date:

Run Start ***NR1***

QC:

Date: SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D2574

Rev E

100

0.00

100

HAAS CNC VERTICAL MACHINING #1

HAAS I

Memo

0.00

HAAS CNC vertical machine #1

Program Batch No. *8610* Double check by: *ST* 1-Machine Step *F.k* 12/07/17
No 1 per Folio FA051 and inspect per attached Dimension Sheets 2-Machine
Step No 2 per Folio FA051 and inspect per attached Dimension Sheets3-
Machine Step No 3 per Folio FA051 and insp

ST 12-7-6
ST 12-7-11

12 *ST*

110

0.00

110

CONVENTIONAL MILLING MACHINE

Mill Conv

Memo

0.00

Conventional Milling Machine

Machine keyway as per dwg D2573 & D2574

ST 12/07/14

12 *ST*

120

0.00

120

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

F.k 12/07/17
ST 12/07/11

12 *ST*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 85610

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Page 2

June-12-12 8:49:16 AM

Item ID: D2574

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Saddle, Aft In 205

Start Date: 12/06/2012 Start Qty: 12.00

12

Cust Item ID:

Required Date: 26/06/2012 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

DAID
14
9-89

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC8- Inspect parts - second check

0.00

130

QC

Memo

0.00

Quality Control

140

Chemical Conversion Coat per QSI005 4.1

0.00

140

HandFinish

Memo

0.00

Hand Finishing

150

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

150

Powdercoat

Memo

0.00

Powder Coating

START TIME:

FINISH TIME:

OVEN TEMPERATURE:

320°F

9:00

M121841

12 7/6 12-7-30

12X 12/7/31

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Work Order ID 85610

June-12-12 8:49:16 AM

85610

Page 3

Item ID: D2574

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Saddle, Aft In 205

Stop ***NS2***

Start Date: 12/06/2012 Start Qty: 12.00

12

Cust Item ID:

Required Date: 26/06/2012 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC3- Inspect Part Finish	0.00							
160									
QC	Memo	0.00				12	6	12	n107/31
Quality Control									
170	Identify as per dwg & Stock Location: <u>SR442</u>	0.00							
170									
Packaging	Memo	0.00				12			12/07/31 JB
Packaging									
180	QC21- Final Inspection - Work Order Release	0.00							
180									
QC	Memo	0.00							12/8/11 JB
Quality Control									

MCS 12/07/31

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

June-12-12 8:49:19 AM

Page 1

Work Order ID: 85610

85610

Parent Item: D2574

D2574

Parent Item Name: Saddle, Aft In 205

Start Date: 12/06/2012

Required Date: 26/06/2012

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP Rev: I As Per RevE 06-01-27 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D6101-005

Manufactured No

110

Each

25.0000

1

12

D6101-005

**

12 12.7.6

Saddle Billet

Location

Loc Qty

Loc Code

MAT041

2

76838

2

MAT044

23

79874

19

81973

4

85429

12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	85610
Description: Saddle, Aft Inboard		Part Number:	D2574
Inspection Dwg: D2574 Rev. E		Page 1 of 1	

Inspect dimensions highlighted on inspection sheet drawing D2574 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1	2	3	4		
A	0.438	0.443	✓	.438	.438	.438	.438		
B	1.745	1.755	✓	1.750	1.750	1.750	1.750		
C	3.495	3.505	✓	3.500	3.500	3.500	3.500		
D	1.745	1.755	✓	1.750	1.750	1.750	1.750		
E	7.990	8.010	✓	7.999	8.002	8.000	8.000		
F	0.490	0.510	✓	.500	.500	.495	.497		
G	0.257	0.262	✓	.258	.258	.258	.258		
H	0.375	0.380	✓	.375	.375	.378	.378		
I	0.490	0.510	✓	.500	.500	.501	.500		
J	1.174	1.184	✓	1.179	1.179	1.178	1.179		
K	0.558	0.578	✓	.569	.569	.567	.565		
L	1.174	1.184	✓	1.179	1.179	1.179	1.179		
M	1.365	1.375	✓	1.370	1.370	1.369	1.370		
N	2.495	2.505	✓	2.500	2.500	2.500	2.502		
O	4.119	4.129	✓	4.124	4.124	4.122	4.124		
P	0.115	0.135	✓	.126	.127	.127	.127		
Q	0.115	0.135	✓	.136	.135	.135	.135		
R	0.240	0.260	✓	.250	.251	.250	.250		
S	0.115	0.135	✓	.126	.125	.122	.125		
T	0.178	0.198	✓	.188	.188	.188	.188		
U	3.210	3.250	✓	3.230	3.230	3.227	3.229		
V	0.230	0.250	✓	.242	.242	.240	.238		
W	0.115	0.135	✓	.132	.132	.131	.131		
X	0.307	0.312	✓	.309	.309	.309	.309		
Y	0.760	0.765	✓	.760	.760	.760	.760		
Z	0.352	0.372	✓	.365	.365	.363	.365		
AA	0.470	0.530	✓	.500	.500	.500	.500		
AB	0.615	0.635	✓	.625	.628	.628	.628		
AC	0.053	0.073	✓	.063	.063	.063	.063		
AD	0.240	0.260	✓	.240	.250	.245	.248		
AE	1.500	1.520	✓	1.516	1.518	1.516	1.516		
AF	0.115	0.135	✓	.135	.135	.135	.135		
AG	0.240	0.280	✓	.261	.265	.265	.265		
AH	0.240	0.260	✓	.249	.248	.245	.245		
AI	2.000	2.020	✓	2.002	2.002	2.002	2.002		
AJ	0.023	0.043	✓	.033	.033	.033	.033		
Accept/Reject									

Measured by:	SA
Date:	12/7/7 / 12/07/09

Audited by:	SMB
Date:	12.7.27 / 12/07/27

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.27	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	85610
Description: Saddle, Aft Inboard		Part Number:	D2574
Inspection Dwg: D2574 Rev. E		Page 1 of 1	

Inspect dimensions highlighted on inspection sheet drawing D2574 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				5	6	7	8		
A	0.438	0.443		.438	.438	.438	.438		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		8.004	8.003	8.001	8.001		
F	0.490	0.510		.497	.506	.501	.509		
G	0.257	0.262		.258	.258	.258	.258		
H	0.375	0.380		.378	.378	.378	.378		
I	0.490	0.510		.5015	.506	.5015	.505		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		.568	.567	.567	.566		
L	1.174	1.184		1.179	1.179	1.179	1.179		
M	1.365	1.375		1.371	1.370	1.371	1.371		
N	2.495	2.505		2.502	2.500	2.501	2.501		
O	4.119	4.129		4.122	4.123	4.123	4.122		
P	0.115	0.135		.127	.127	.125	.125		
Q	0.115	0.135		.135	.135	.135	.135		
R	0.240	0.260		.251	.251	.250	.249		
S	0.115	0.135		.122	.119	.1245	.122		
T	0.178	0.198		.188	.188	.188	.188		
U	3.210	3.250		3.228	3.229	3.229	3.229		
V	0.230	0.250		.237	.237	.238	.239		
W	0.115	0.135		.122	.126	.125	.127		
X	0.307	0.312		.309	.309	.309	.309		
Y	0.760	0.765		.760	.760	.760	.760		
Z	0.352	0.372		.363	.362	.364	.365		
AA	0.470	0.530		.500	.500	.500	.500		
AB	0.615	0.635		.629	.6275	.627	.627		
AC	0.053	0.073		.063	.063	.063	.063		
AD	0.240	0.260		.248	.245	.246	.246		
AE	1.500	1.520		1.5155	1.515	1.5136	1.513		
AF	0.115	0.135		.135	.135	.135	.135		
AG	0.240	0.280		.265	.265	.265	.265		
AH	0.240	0.260		.245	.245	.246	.246		
AI	2.000	2.020		2.0085	2.008	2.0058	2.006		
AJ	0.023	0.043		.033	.033	.033	.033		
Accept/Reject									

Measured by:	JS
Date:	12/07/10

Audited by:	SMB
Date:	12.7.27

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.27	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	85610
Description: Saddle, Aft Inboard		Part Number:	D2574
Inspection Dwg: D2574 Rev. E		Page 1 of 1	

Inspect dimensions highlighted on inspection sheet drawing D2574 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				9 x	10 x	11 x	12 x		
A	0.438	0.443		.438	.438	.438	.438		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		8.000	8.001	8.001	8.003		
F	0.490	0.510		.501	.501	.500	.500		
G	0.257	0.262		.258	.258	.258	.258		
H	0.375	0.380		.378	.378	.378	.378		
I	0.490	0.510		.503	.502	.501	.502		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		.566	.568	.567	.568		
L	1.174	1.184		1.179	1.179	1.179	1.179		
M	1.365	1.375		1.371	1.371	1.371	1.371		
N	2.495	2.505		2.499	2.500	2.500	2.500		
O	4.119	4.129		4.123	4.124	4.124	4.124		
P	0.115	0.135		.127	.126	.126	.126		
Q	0.115	0.135		.135	.135	.135	.135		
R	0.240	0.260		.250	.249	.249	.248		
S	0.115	0.135		.125	.125	.126	.126		
T	0.178	0.198		.188	.188	.188	.188		
U	3.210	3.250		3.230	3.230	3.230	3.230		
V	0.230	0.250		.238	.240	.240	.240		
W	0.115	0.135		.126	.130	.130	.133		
X	0.307	0.312		.309	.309	.309	.309		
Y	0.760	0.765		.760	.760	.760	.760		
Z	0.352	0.372		.362	.362	.365	.366		
AA	0.470	0.530		.500	.500	.500	.500		
AB	0.615	0.635		.627	.627	.625	.627		
AC	0.053	0.073		.063	.063	.063	.063		
AD	0.240	0.260		.245	.245	.245	.245		
AE	1.500	1.520		1.514	1.513	1.513	1.513		
AF	0.115	0.135		.135	.135	.135	.135		
AG	0.240	0.280		.265	.265	.265	.265		
AH	0.240	0.260		.245	.247	.251	.250		
AI	2.000	2.020		2.006	2.005	2.005	2.007		
AJ	0.023	0.043		.033	.033	.033	.033		
Accept/Reject									

Measured by:	JS	Audited by:	SmB
Date:	12/07/11 / 12/07/12	Date:	12-7-27 / 12/16/2012

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.27	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

RELEASED

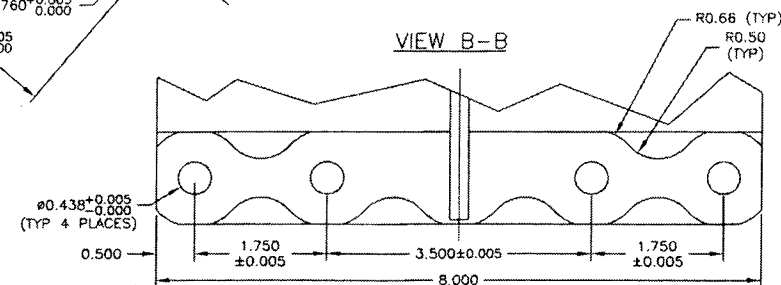
05.07.13

NOTES

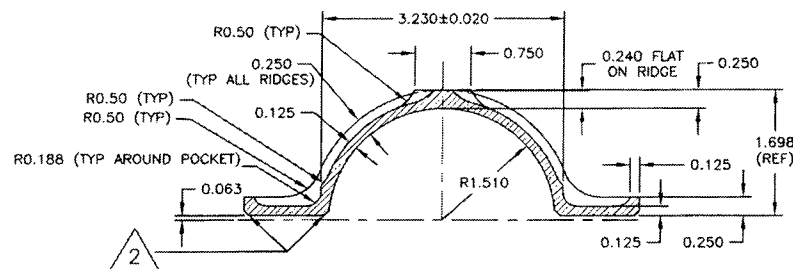
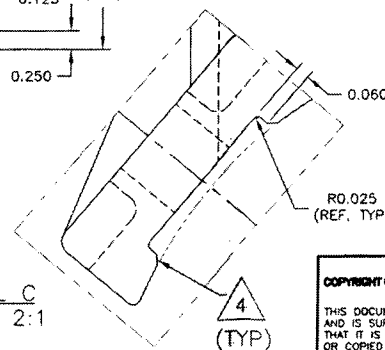
MATERIAL: 7075-T7351 (00-A-250/12)
 (REF DART SPEC. D6102-003)
 FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1
 POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER
 DART QSI 005 4.3
 BREAK ALL SHARP EDGES 0.010 TO 0.020
 TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

- 1 ENGRAVE PART AND BATCH NUMBER IN THIS AREA TO MAX DEPTH OF 0.010
 2 CHAMFER 0.063" x 45° AROUND THIS SURFACE (TYPICAL 2 PLACES)
 3 CHAMFER 0.063 x 45° ALL AROUND
 4 CHAMFER 0.033 x 45° (SEE DETAIL C) E

VIEW B-B



SECTION A-A

DETAIL C
SCALE 2:1

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 OR COPIED OR COMMUNICATED TO ANY OTHER
 PERSON WITHOUT WRITTEN PERMISSION FROM
 DART AEROSPACE LTD.

E	05.07.13	ADD CHAMFER ON RIDGE NOTE 4
D	02.09.06	ADD RIDGES; TIGHTEN TOLERANCES
C	99.10.22	INCP. DEC 9123/9079/9102 ADD DIMENSIONS PER TSR A1177
B	96.12.02	ADD GRAIN DIR., 0.438 WAS 0.425
A	96.09.16	NEW ISSUE
DESIGN	DS	DRAWN BY PH
CHECKED	PH	APPROVED
DATE	05.07.13	TITLE
		INNER AFT SADDLE
		SCALE
		2:3

SHOP COPY

RETURN TO
 ENGINEERING
 UNCONTROLLED COPY
 SUBJECT TO AMENDMENT

WITHOUT NOTICE
 WORK ORDER
 NO. BS610 MLJ

12/06/12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng.	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries